PATENT SPECIFICATION

Convention Date (Belgium): May 13, 1927. **290,300**

Application Date (in United Kingdom): May 12, 1928. No. 14,014/28.

Complete Accepted: Aug. 1, 1929.

COMPLETE SPECIFICATION.

Improvements in and relating to Control Surfaces for Aircraft.

I, Louis Peyret, Engineer, a French Citizen, of 100, rue Rouget de l'Isle, Suresnes (Seine), France, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to steering or controlling surfaces for air-craft and has for its object to provide such surfaces of high efficiency.

It has previously been proposed in marine vessels to constitute the rudder by a part hinged together and linked so that the surfaces of such rudders have progressive curvatures. It has also been proposed for the wings of air-craft to alter the curvature of the front portions thereof by constituting the said front portions by one or more longitudinal parts articulated together so that when the front part with the leading edge (and the adjoining longitudinal parts if more than one) is lifted or lowered the curvature of the wing section will be made less or more; each part is formed with a semi-circular convex portion to fit a corresponding semi-circular concave portion formed in an adjacent part, the parts being pivoted together at the centre of the semi-circular formations and connected together by cables, bands, struts, links or other means to ensure their acting together symmetrically when the front part is moved up or down, such symmetrical change of position resulting in a change of the curvature of the wing section without distortion of the movable portions of the wings, whilst to raise or lower the front part, a strut can be fastened direct to said part and operated in any convenient way from the pilot's seat, or cables or bands may be fastened to the front part one such cable extending from the upper portion of said front part over and above the articulated parts and over a pulley mounted in the principal main part of the wing to a transverse shaft also carried by the principal main part of the wing, whilst another cable or band extends from the lower portion of the said front part beneath the articulated parts and over a second pulley mounted in the principal main part of the wing to the said transverse shaft, the arrangement being such that when the transverse shaft is rotated by the pilot the front part is raised or lowered according to which ever way the transverse shaft is rotated. It has still further been proposed to form the trailing portions of air-craft wings to be adjustable to vary their curvature with the main body of the wing, and in some cases to interconnect the tailing portions and front adjustable portion so that one adjustment effects both the changes of the curvature of the front portion and the trailing portions.

According to the present invention a steering or controlling surface for air-craft consisting of hinged together parts that are interconnected in such a way that the operation of a single element determines the relative displacement of all the parts is characterised by the fact that its operation is effected by that one of its elements which is mounted pivotally on an axle carried by the air-craft.

In order that the invention may be better understood, it will now be described with reference to the accompanying drawings in which:—

Figs. 1 and 2 of these drawings shew respectively in section on a vertical plane parallel to the axis of the aeroplane and in perspective, an aileron of the aeroplane constructed according to the invention.

Fig. 3 shews in the same manner as Fig. 1, an aileron applied to the wing of an aeroplane and constructed according to the invention.

Figs. 4 and 5 shew, in the same manner as Fig. 1, two other ailerons of aeroplanes constructed according to the invention.

Fig. 6 shews in the same manner as Fig. 3 another aeroplane wing with an aileron constructed according to the invention.

In the drawings it will be seen that the steering or controlling surface is so constituted that it comprises rows, suitably interconnected, of surface elements *a* disposed, in the extension of one another, in the plane where the curvatures of the said surface have to take place, connected, towards one of their ends to a support *b*.

Fig. 3

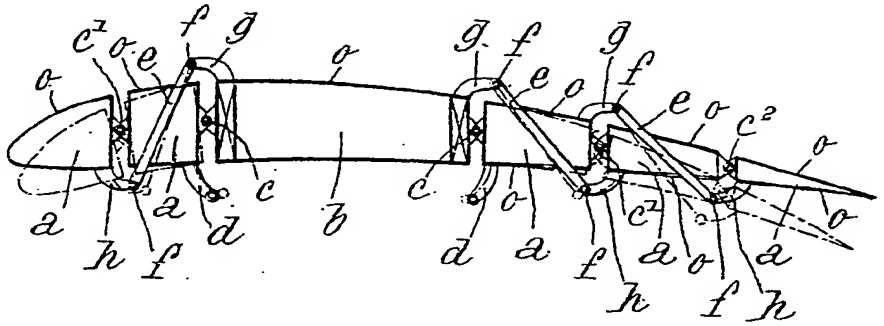


Fig. 4

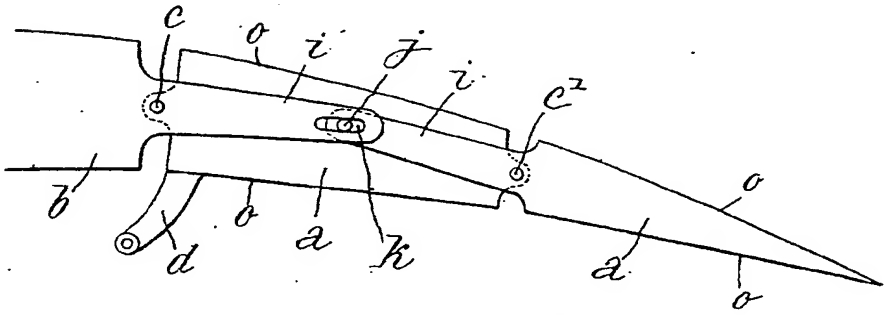
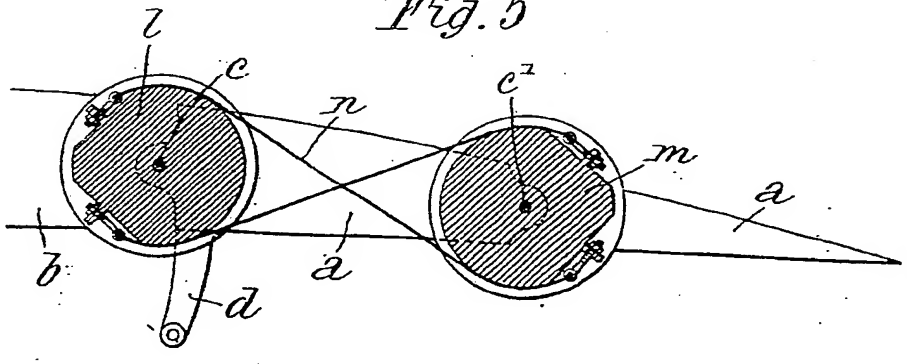


Fig. 5



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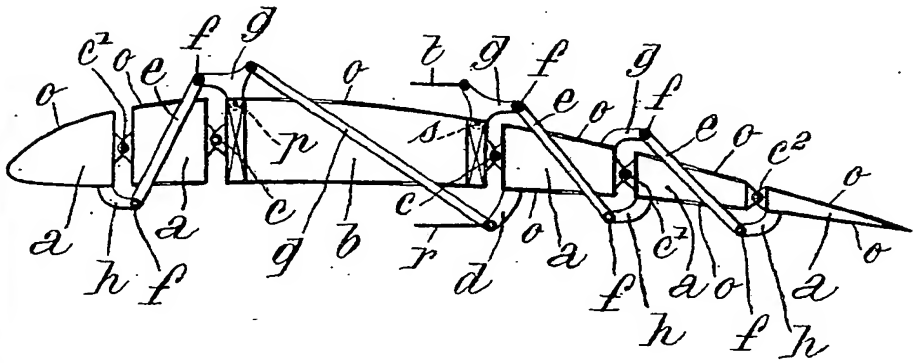
[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 6.



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